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=> d his

     (FILE 'HOME' ENTERED AT 12:24:23 ON 26 NOV 2008)
     FILE 'REGISTRY' ENTERED AT 12:24:30 ON 26 NOV 2008
L1      11 S LUMINOL NOT (POLYMER OR ALUMINUM OR BENZAZA? OR LUMINOLOD? OR
           OXATHIA? OR AZALUM? OR DIAZALUM? OR LUMINOLAC)
     FILE 'CA' ENTERED AT 12:24:47 ON 26 NOV 2008
L2    7820 S L1 OR ABEI OR ISOLUMINOL OR LUMINOL OR ETHYLISOLUMINOL OR 3-
           AMINOPHTHALHYDRAZIDE OR 3-AMINOPHTHALIC ACID HYDRAZIDE OR 3-
           AMINOPHTHALIC HYDRAZIDE OR DIHYDROXYPHTHALAZINE OR
           PHTHALAZINEDIONE
L3   28941 S (EXTRACT? OR RECOVER? OR ACQUIR?) (5A)(DNA OR OLIGONUCLE? OR
           POLYNUCLE?)
L4     179 S L3 AND(BLOOD STAIN OR BLOODSTAIN OR BLOODY OR CRIME OR PHYSI?
           (2A) EVIDENCE)
L5      11 S L2 AND L3
L6      87 S L4 NOT FORENSIC/SO
L7      54 S L6 AND PY<2003
L8      65 S L5,L7
     FILE 'BIOSIS' ENTERED AT 12:34:23 ON 26 NOV 2008
L9      47 S L8 AND PY<2002
     FILE 'MEDLINE' ENTERED AT 12:34:51 ON 26 NOV 2008
L10     61 S L8 AND PY<2002
     FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 12:36:30 ON 26 NOV 2008
L11    111 DUP REM L8 L9 L10 (62 DUPLICATES REMOVED)

=> d bib,ab l11 1-111

L11  ANSWER 8 OF 111  CA  COPYRIGHT 2008 ACS on STN
AN   137:212100  CA
TI   Real-time DNA quantification of nuclear and mitochondrial DNA in
     forensic analysis
AU   Andreasson, Hanna; Gyllensten, Ulf; Allen, Marie
CS   Rudbeck Laboratory, Uppsala University, Uppsala, Swed.
SO   BioTechniques (2002), 33(2), 402-404, 407-411
AB   The rapid development of mol. genetic anal. tools has made it possible
     to analyze most biol. material found at the scene of a crime. Evidence
     materials contg. DNA quantities too low to be analyzed using nuclear
     markers can be analyzed using the highly abundant mtDNA. However, there
     is a shortage of sensitive nDNA and mtDNA quantification assays. In
     this study, an assay for the quantification of very small amts. of DNA,
     based on the real-time Taq-Man assay, has been developed. This anal.
     will provide an est. of the total no. of nDNA copies and the total no.
     of mtDNA mols. in a particular evidence material. The quantification is
     easy to perform, fast, and requires a min. of the valuable DNA extd.
     from the evidence material. The results will aid in the evaluation of
     whether the specific sample is suitable for nDNA or mtDNA anal.
     Furthermore, the optimal amt. of DNA to be used in further anal. can be
     estd., ensuring that the anal. is successful and that the DNA is
     retained for future independent anal. This assay has significant
     advantages over existing techniques because of its high sensitivity,
     accuracy, and the combined anal. of nDNA and mtDNA. Moreover, it has
     the potential to provide addnl. information about the presence of
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inhibitors in forensic samples. Subsequent mitochondrial and nuclear anal. of quantified samples illustrated the potential to predict the no. of DNA copies required for a successful anal. in a certain typing assay.

L11 ANSWER 11 OF 111 CA COPYRIGHT 2008 ACS on STN
AN 138:164927 CA
TI Multiplex short tandem repeat typing in degraded samples using newly designed primers for the TH01, TPOX, CSF1PO, and vWA loci
AU Tsukada, Kazuhiko; Takayanagi, Kayoko; Asamura, Hideki; Ota, Masao; Fukushima, Hirofumi
CS Department of Legal Medicine, Shinshu University School of Medicine, Matsumoto, Nagano, 390-8621, Japan
SO Legal Medicine (2002), 4(4), 239-245
AB The authors performed multiplex polymerase chain reaction (PCR) for the TH01, TPOX, CSF1PO, and vWA loci using a newly designed pair of primers that yield smaller fragments than reported previously [Fujii et al., J Hum Genet 45 (2000) 303; Lederer et al., Int J Legal Med 114 (2000) 87]. These loci can be detected in the range of 74-143 bp amplifying products. This system required genomic DNA in a range of 80 pg to 2 ng, and proved to be a sensitive typing method. The authors compared our system against the GenePrint Fluorescent STR Multiplex Systems CTTv (Promega, Madison, WI, USA), using DNA extd. from old bloodstains left to stand for 17-26 yr at room temp. With this designed system, all allele-typing efforts were successful in the range of 1-5 ng DNA, while no signal peaks were detected, even with when using 10 ng of DNA GenePrint Fluorescent STR Multiplex Systems CTTv.

L11 ANSWER 45 OF 111 MEDLINE on STN
AN 1999010054 MEDLINE
TI Rapid, simple alkaline extraction of human genomic DNA from whole blood, buccal epithelial cells, semen and forensic stains for PCR.
AU Rudbeck L; Dissing J
CS University of Copenhagen, Denmark.
SO BioTechniques, (1998 Oct) Vol. 25, No. 4, pp. 588-90, 592.

L11 ANSWER 62 OF 111 MEDLINE on STN
AN 1995298336 MEDLINE
TI Identification of ABO alleles on forensic-type specimens using rapid-ABO genotyping.
AU Crouse C; Vincek V
CS Palm Beach County Sheriff's Office Crime Laboratory, FL, USA.
SO BioTechniques, (1995 Mar) Vol. 18, No. 3, pp. 478-83.
AB Historically, forensic and clinical laboratories utilize serological techniques to identify ABO blood types. These techniques rely on the detection of ABO-associated proteins and are sensitive with very accurate results. This laboratory has simplified the identification of ABO types by taking advantage of previously reported ABO DNA sequence differences. The Rapid-ABO technique involves a two-step process: (i) amplification of DNA samples using primer sets specific for the ABO alleles and (ii) electrophoresis and visualization of amplified ABO fragments on a 3% MetaPhor agarose gel. The major advantage of the Rapid-ABO technique is the identification of ABO genotypes compared to serological tests for ABO phenotypes. This two-step process identifies

six possible ABO genotypes including AB, AA, BB, AO, BO and OO. The Rapid-ABO protocol works well with DNA extracted organically or using Chelex 100. Results can be obtained in less than a day utilizing 2 ng of DNA in the amplification reaction. Analysis of 23 animal species shows the Rapid-ABO primers amplify ABO alleles from only human, chimpanzee and gorilla DNA.

L11 ANSWER 67 OF 111 BIOSIS COPYRIGHT on STN
AN 1996:59669 BIOSIS
TI Extraction of high quality DNA from bloodstains using diatoms.
AU Guenther, Stefan [Reprint author]; Herold, Jens; Patzelt, Dieter
CS Inst. Rechtsmed., Julius-Maximilians-Univ., Versbacher-Strasse 3, D-97078 Wuerzburg, Germany
SO International Journal of Legal Medicine, (1995) Vol. 108, No. 3, pp. 154-156.
AB A simple method is described for the extraction of high quality DNA for PCR amplification. The DNA was extracted by using Chelex-100 ion exchange resin or a special cell lysis buffer containing proteinase K. For further purification the DNA was bound to silica in the presence of a chaotrophic agent. Hence it is possible to unlimitedly wash the bound DNA and inhibitory substances are removed. By using diatoms as a source of silicates, this method is very economical and can therefore be used as a routine method.

L11 ANSWER 94 OF 111 BIOSIS on STN
AN 1991:409516 BIOSIS
TI EXTRACTION STRATEGY FOR OBTAINING DNA FROM BLOODSTAINS FOR PCR AMPLIFICATION AND TYPING OF THE HLA-DQ-ALPHA GENE.
AU JUNG J M [Reprint author]; COMEY C T; BAER D B; BUDOWLE B
CS FORENSIC SCI RES TRAINING CENT, FBI ACAD, QUANTICO, VA 22135, USA
SO International Journal of Legal Medicine, (1991) Vol. 104, No. 3, pp. 145-148.
AB A simple, practical approach for the extraction of PCR-amplifiable DNA for the HLA-DQα gene from bloodstains deposited on various substrate is described. DNA from bloodstains is purified using Chelex 100 ion-exchange resin and then amplified. If amplification is not achieved, the extract is washed through a Centricon 100 dialysis/concentration tube. If the second amplification of this extract produces a negative result, the extract is processed with Chelex 100 again. This approach was found to be reliable, safe, efficient and economical.

L11 ANSWER 96 OF 111 CA COPYRIGHT 2008 ACS on STN
AN 113:127775 CA
OREF 113:21581a,21584a
TI Amplification of the hypervariable region close to the apolipoprotein B gene: application to forensic problems
AU Vuorio, Alpo F.; Sajantila, Antti; Hamalainen, Tiina; Syvanen, Ann Christine; Ehnholm, Christian; Peltonen, Leena
CS Lab. Mol. Genet., Natl. Public Health Inst., Helsinki, SF-00300, Finland
SO Biochemical and Biophysical Research Communications (1990), 170(2), 616-20
AB To identify individuals from blood stains in two murder cases, primers

were used flanking the hypervariable region of the apoB gene to amplify DNA extd. from blood stains and blood samples from suspects. The sensitivity and specificity of the procedure was improved by carrying out 2 consecutive polymerase chain reaction amplifications with a nested set of primers in the 2nd amplification. The size of the generated fragments were detd. by PAGE followed by staining with ethidium bromide. By comparing the fragments produced from the stains with those from the blood samples the origin of the blood stains was detd. in both cases.

L11 ANSWER 107 OF 111 CA COPYRIGHT 2008 ACS on STN
AN 106:97499 CA
OREF 106:15865a,15868a
TI An evaluation of DNA fingerprinting for forensic purposes
AU Gill, Peter; Lygo, Joan E.; Fowler, Susan J.; Werrett, David J.
CS Cent. Res. Establ., Home Off. Forensic Sci. Serv., Aldermaston/Reading/Berkshire, RG7 4NP, UK
SO Electrophoresis (1987), 8(1), 38-44
AB Many highly polymorphic minisatellite loci can be detected simultaneously in the human genome by hybridization to probes consisting of tandem repeats of the core sequence. The resulting DNA fingerprints produced by Southern blot hybridization are comprised of multiple hypervariable DNA fragments, show somatic and germ-line stability, and are completely specific to an individual. DNA of high mol. wt. can be isolated from blood and semen stains up to 4 yr old. Sperm nuclei can be sepd. from vaginal debris and the sperm DNA examd. in isolation, allowing the pos. identification of rapists. Correspondingly, vaginal DNA can be isolated from exts. of penile swabs. DNA can also be isolated from exts. of buccal swabs. A blind trial involving 43 blood samples, 11 blood stains and 11 semen stains has been successfully carried out. It is envisaged that genetic fingerprinting will shortly form an important part of casework procedure in forensic science labs.

=> log y
STN INTERNATIONAL LOGOFF AT 12:37:38 ON 26 NOV 2008

=> d his

(FILE 'HOME' ENTERED AT 09:07:18 ON 26 NOV 2008)
FILE 'REGISTRY' ENTERED AT 09:07:36 ON 26 NOV 2008
L1 35 S LUMINOL
L2 24 S L1 NOT (POLYMER OR ALUMINUM)
L3 11 S L2 NOT(BENZAZA? OR LUMINOLOD? OR OXATHIA? OR AZALUM? OR DIAZALUM? OR LUMINOLAC)
SEL NAME L3
FILE 'CA' ENTERED AT 09:17:13 ON 26 NOV 2008
L4 7425 S L3 OR E1-21 (ABEI OR ISOLUMINOL OR LUMINOL OR ETHYLISOLUMINOL OR 3-AMINOPHTHALHYDRAZIDE OR 3-AMINOPHTHALIC ACID HYDRAZIDE OR 3-AMINOPHTHALIC HYDRAZIDE OR DIHYDROXYPHTHALAZINE OR PHTHALAZINEDIONE)
L5 301 S L4 AND (DNA OR OLIGONUCLE? OR POLYNUCLE?)
L6 938 S L4 AND PH
L7 22 S L5 AND L6
L8 14111 S (CRIME OR FORENSC? OR (BLOOD OR HEMATIN?)(5A)(DETECT? OR ANALY?

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          OR IDENTIF? OR TEST?)) AND (DNA OR OLIGONUCLE? OR POLYNUCLE?)
L9      30 S L8 AND L4
L10   7377 S L8 AND (PCR OR POLYMERASE)
L11     82 S L10 AND PH
L12    131 S L7,L9,L11
L13     58 S L12 AND PY<2003
L14     12 S L12 NOT L13 AND PATENT/DT AND PY<2005
     FILE 'BIOSIS' ENTERED AT 09:32:09 ON 26 NOV 2008
L15     14 S L13
     FILE 'MEDLINE' ENTERED AT 09:33:08 ON 26 NOV 2008
L16    205 S L13
L17      4 S L16 AND (DNA OR OLIGONUCLE? OR POLYNUCLE?)(4A)(YEILD OR RECOVER?)
L18      2 S L16 AND PH AND(CRIME OR BLOOD STAIN OR FORENS?)
     FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 09:41:07 ON 26 NOV 2008
L19     79 DUP REM L13 L14 L15 L17 L18 (11 DUPLICATES REMOVED)

=> d bib,ab,kwic l19 1-79

L19  ANSWER 31 OF 79  CA  COPYRIGHT 2008 ACS on STN
AN   134:67262  CA
TI   The presumptive reagent fluorescein for detection of dilute bloodstains
     and subsequent STR typing of recovered DNA
AU   Budowle, Bruce; Leggitt, Jeffrey L.; Defenbaugh, Debra A.; Keys,
     Kathleen M.; Malkiewicz, Steven F.
CS   Scientific Analysis Section, FBI Academy, Quantico, VA, USA
SO   Journal of Forensic Sciences (2000), 45(5), 1090-1092
AB   A presumptive reagent for dil. blood detection other than luminol is
     fluorescein.  The sensitivity of fluorescein approaches the sensitivity
     of detection levels of luminol.  The fluorescein detection method offers
     the advantages of working in a lighted environment, and the reaction
     persists longer than luminol.  A series of dild. bloodstains, ranging
     from neat to 1:1,000,000, was placed on a variety of substrates.  Three
     sets were made per substrate.  One set was exposed to fluorescin, one
     set was exposed to luminol, and one set served as an uncontaminated
     control.  The fluorescein signal persisted longer than luminol.
     However, background staining for fluorescein was obsd. on some
     substrates within 30 s to 1 min, and no background staining was obsd.
     for luminol.  Stains on non-absorbent surfaces were detectable at
     1:100,000 dilns., and stains on absorbent surfaces were detectable
     usually at no more than 1:100.  The sensitivity of detection of
     fluorescein was comparable to that of luminol in this study.  In all
     cases, where sufficient DNA was recovered, typeable results at all 13
     core CODIS STR loci were obtained from treated bloodstains and controls.
     The results from STR typing indicate that there was no evidence of DNA
     degrdn.

L19  ANSWER 32 OF 79  CA  COPYRIGHT 2008 ACS on STN
AN   134:247656  CA
TI   A novel approach to obtaining reliable PCR results from luminol treated
     bloodstains
AU   Della Manna, Angelo; Montpetit, Shawn
CS   Alabama Department of Forensic Sciences, Birmingham, AL, USA
SO   Journal of Forensic Sciences (2000), 45(4), 886-890
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AB In recent years the forensic scientist has been afforded great advances in technol. both in the detection of latent bloodstains and in acquiring reliable DNA typing results from very small pieces of phys. evidence. Scientists are now able to detect minute quantities of latent bloodstains by utilizing the luminol reagent, oftentimes indicating that an attempt has been made to conceal any evidence of bloodshed. With the introduction of PCR based technol. to the forensic arena, scientists are now routinely able to obtain DNA typing results from previously insufficient amts. of biol. material, items as small as a single hair, saliva on a cigarette butt, or a bloodstain the size of a pin head. The authors present here a merging of these two advances coupled with a new collection medium for post luminol treated latent bloodstains. The forensic scientist is now able to routinely isolate and recover an adequate amt. of DNA suitable for PCR typing at all of the Promega GenePrint PowerPlex 1.1 loci. In this study, several dilns. of latent bloodstains were prepd. in an effort to simulate transferred bloodstains that are routinely encountered in a crime scene setting. The latent bloodstains were treated with luminol and subsequently collected using conventional cotton tipped swabs as well as a Puritan sponge tipped swab. PCR typing at the Promega GenePrint PowerPlex 1.1 loci was then attempted upon all dilns. of the latent bloodstains for both collection media. The results clearly indicate that it is now routinely possible to recover adequate amts. of DNA suitable for PCR typing upon post luminol treated bloodstains.

L19 ANSWER 33 OF 79 MEDLINE on STN
AN 2000243049 MEDLINE
TI Fingerprint enhancement revisited and the effects of blood enhancement chemicals on subsequent profiler Plus fluorescent short tandem repeat DNA analysis of fresh and aged bloody fingerprints.
AU Fregeau C J; Germain O; Fourney R M
CS Royal Canadian Mounted Police, Central Forensic Laboratory, National DNA Data Bank, Ottawa, Ontario, Canada.
SO Journal of forensic sciences, (2000 Mar) Vol. 45, No. 2, pp. 354-80.
AB This study was aimed at determining the effect of seven blood enhancement reagents on the subsequent Profiler Plus fluorescent STR DNA analysis of fresh or aged bloody fingerprints deposited on various porous and nonporous surfaces. Amido Black, Crowle's Double Stain. 1,8-diazafluoren-9-one (DFO), Hungarian Red, leucomalachite green, luminol and ninhydrin were tested on linoleum, glass, metal, wood (pine, painted white), clothing (85% polyester/15% cotton, 65% polyester/35% cotton, and blue denim) and paper (Scott 2-ply and Xerox-grade). Preliminary experiments were designed to determine the optimal blood dilutions to use to ensure a DNA typing result following chemical enhancement. A 1:200 blood dilution deposited on linoleum and enhanced with Crowle's Double Stain generated enough DNA for one to two rounds of Profiler Plus PCR amplification. A comparative study of the DNA yields before and after treatment indicated that the quantity of DNA recovered from bloody fingerprints following enhancement was reduced by a factor of 2 to 12. Such a reduction in the DNA yields could potentially compromise DNA typing analysis in the case of small stains. The blood enhancement chemicals selected were also evaluated for their capability to reveal bloodmarks on the various porous and nonporous surfaces chosen

in this study. Luminol. Amido Black and Crowle's Double Stain showed the highest sensitivity of all seven chemicals tested and revealed highly diluted (1:200) bloody fingerprints. Both luminol and Amido Black produced excellent results on both porous and nonporous surfaces, but Crowle's Double Stain failed to produce any results on porous substrates. Hungarian Red, DFO, leucomalachite green and ninhydrin showed lower sensitivities. Enhancement of bloodmarks using any of the chemicals selected, and short-term exposure to these same chemicals (i.e., less than 54 days), had no adverse effects on the PCR amplification of the nine STR systems surveyed (D3S 1358, HumvWA, HumFGA, D8S1179, D21S11, D18S51, D5S818, D13S317, D7S820) or of the gender determination marker Amelogenin. The intensity of the fluorescent signals was very similar and the allele size measurements remained constant and identical to those of untreated bloody fingerprints. No additional background fluorescence was noted. Continuous exposure (for 54 days) to two of the seven enhancement chemicals selected (i.e., Crowle's Double Stain and Hungarian Red) slightly reduced the amplification efficiency of the longer STR loci in profiles of fresh and 7 to 14-day-old bloodprints. This suggests that long-term exposure to these chemicals possibly affects the integrity of the DNA molecules. This study indicates that significant evidence can be obtained from fresh or aged bloody fingerprints applied to a variety of absorbent and nonabsorbent surfaces which are exposed to different enhancement chemicals for short or long periods of time. It also reaffirms that PCR STR DNA typing procedures are robust and provide excellent results when used in concert with fluorescence-based detection assays after fingerprint identification has taken place.

L19 ANSWER 40 OF 79 CA COPYRIGHT 2008 ACS on STN
AN 132:289701 CA
TI The effect of luminol on presumptive tests and DNA analysis using the polymerase chain reaction
AU Gross, Ann Marie; Harris, Katy A.; Kaldun, Gary L.
CS Minnesota Forensic Science Laboratory, St. Paul, MN, 1246, USA
SO Journal of Forensic Sciences (1999), 44(4), 837-840
AB This study was designed to test the following factors involved with processing luminol treated bloodstained evidence: 1) The reactivity of other presumptive chem. color tests, phenolphthalin (PT) and tetramethylbenzidine (TMB), following the application of the light emitting luminol presumptive test. 2) The effect of different cleanings of various bloody substrates on the luminol test. 3) The effect of different cleanings of various bloody substrates on the ability to obtain DNA suitable for PCR testing. 4) The ability to ext. DNA from luminol treated bloodstained substrates using three extn. techniques. 5) The effect of spraying washed and unwashed bloodstains on various substrates with luminol on the ability to correctly type the DNA using PCR. The current findings indicated that luminol did not adversely effect the PCR testing and did not interfere with the PT and TMB presumptive tests for blood. It was detd. that the substrate and the method of cleaning were the major factors affecting DNA yield and the ability to type the bloodstains using PCR based technologies.

L19 ANSWER 50 OF 79 CA COPYRIGHT 2008 ACS on STN

AN 130:77184 CA
TI Forensic science education at the University of Auckland
AU Miskelly, Gordon
CS Department of Chemistry, University of Auckland, Auckland, N. Z.
SO Chemistry in New Zealand (1998), 62(3), 9-11
AB A review and discussion with 11 refs. This paper outlines the academic course offered at the University of Auckland, and also presents several of the projects studied by MSc students in 1997 and 1998. Homebake heroin, modifications to luminol sprays used at crime scenes, and effect of chems. on DNA fingerprinting are discussed.

L19 ANSWER 70 OF 79 CA COPYRIGHT 2008 ACS on STN
AN 117:144921 CA
OREF 117:24989a,24992a
TI Effects of presumptive test reagents on the ability to obtain restriction fragment length polymorphism (RFLP) patterns from human blood and semen stains
AU Hochmeister, Manfred N.; Budowle, Bruce; Baechtel, F. Samuel
CS Dep. Forensic Med., Bern, Switz.
SO Journal of Forensic Sciences (1991), 36(3), 656-61
AB In order to investigate the potential effects of presumptive test reagents on the DNA present in evidentiary samples, bloodstains on cotton and glass were exposed directly to luminol, benzidine, phenolphthalein, o-tolidine, and leucomalachite green, whereas semen stains and vaginal swabs contg. semen were exposed directly to bromochloroindolyl phosphate (BCIP) and sodium thymolphthalein monophosphate (STMP) reagents. The yield gels for DNA quality and quantity and restriction fragment length polymorphism (RFLP) results indicated that bloodstains exposed to luminol, benzidine dissolved in ethanol, and phenolphthalein, as well as semen stains and vaginal swabs exposed to BCIP and STMP yield RFLP patterns consistent with that of the uncontaminated control. Except for the phenolphthalein treatment, the quantity of extractable, high-mol.-wt. DNA obtained was comparable with that of untreated stains. Therefore, evidentiary material purposely or inadvertently contaminated with these reagents can be successfully typed. However, stains exposed to benzidine dissolved in glacial acetic acid, leucomalachite green, and o-tolidine failed to yield high-mol.-wt. DNA or to produce any RFLP patterns.

=> log y
STN INTERNATIONAL LOGOFF AT 09:43:09 ON 26 NOV 2008